questions for the first time. The aim of the present study was to test the inter-rater reliability of PANSS-6 ratings obtained using the SNAPSI.

Methods: The team of raters (five medical doctors and two psychologists) attended training sessions prior to the inter-rater reliability test. At the training sessions one rater interviewed a patient with schizophrenia using the SNAPSI, while all raters conducted PANSS-6 ratings independently. After each interview the PANSS-6 ratings were discussed until an agreement was reached. Each rater participated in at least six SNAPSI/PANSS-6 training ratings.

For the inter-rater reliability test, a total of 12 patients with a primary diagnosis of schizophrenia, currently undergoing in- or outpatient treatment at the Department for Psychosis, Aarhus University Hospital – Denmark, will be recruited. The team of raters will perform a total of at least 50 PANSS-6 ratings via SNAPSI. All raters will conduct the SNAPSI at least once. As a measure of inter-rater reliability, we will calculate the Intraclass Correlation Coefficient based on the 50 PANSS-6 ratings.

Results: The results of the inter-rater reliability test will be available in January 2018 and presented at the SIRS 2018 conference.

Discussion: If the results of the inter-rater reliability test are satisfactory, we will conduct a clinical validation of PANSS-6. In this study we will test whether PANSS-6 ratings obtained using the SNAPSI correspond to PANSS-6 ratings extracted from independent PANSS-30 ratings obtained using the SCI-PANSS. If this is the case, PANSS-6 ratings obtained using the SNAPSI will facilitate valid measurement-based care of schizophrenia in clinical practice.

S49. EFFICACY OF HIGH-FREQUENCY REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION ON PANSS FACTORS IN SCHIZOPHRENIA WITH PREDOMINANT NEGATIVE SYMPTOMS – RESULTS FROM AN EXPLORATORY RE-ANALYSIS

Maximilian Hansbauer*[,1], Thomas Wobrock[2], Birgit Kunze[2], Berthold Langguth[3], Michael Landgrebe[3], Joachim Cordes[4], Wolfgang Wölwer[4], Georg Winterer[5], Wolfgang Gaebel[4], Göran Hajak[6], Christian Ohmann[7], Pablo Verde[4], Marcella Rietschel[8], Raees Ahmed[2], William Honer[9], Berend Malchow[1], Wolfgang Strube[1], Thomas Schneider-Axmann[1], Peter Falkai[1], Alkomiet Hasan[1]

[1]Ludwig Maximilian University; [2]Universität Göttingen; [3]University of Regensburg; [4]Heinrich-Heine University [5]Charite – University Medicine Berlin; [6]Sozialstiftung Bamberg; [7]European Clinical Research Network (ECRIN); [8]Central Institute of Mental Health; [9]University of British Columbia

Background: Repetitive transcranial magnetic stimulation (rTMS) applied to the left frontal lobe is discussed to be a promising add-on treatment for negative symptoms in schizophrenia. The Positive and Negative Syndrome Scale (PANSS) has been used as outcome parameter in several previous rTMS trials, but studies focusing on PANSS factor analyses are lacking.

For this purpose, we used the available PANSS data of the 'rTMS for the Treatment of Negative Symptoms in Schizophrenia' (RESIS) trial to calculate different literature-based PANSS factors and to re-evaluate the impact of rTMS on negative symptoms in this trial.

Methods: In an exploratory re-analysis of published data from the RESIS study (Wobrock et al. 2015), we tested the impact of rTMS applied to the left dorsolateral prefrontal cortex on two PANSS factors for negative symptoms in psychotic disorders as well as on a PANSS five-factor consensus model intending to show that active rTMS treatment improves PANSS negative symptom subscores.

Results: In accordance to the original analysis, all PANSS factors showed an improvement over time in the active and, to a considerable extent, also in the sham rTMS group. However, comparing the data before and directly after the rTMS intervention, the PANSS excitement factor improved in the active rTMS group significantly more than in the sham group, but this finding did not persist if follow-up data were taken into account. These additional analyses extend the previously reported RESIS trial results showing unspecific improvements in the PANSS positive subscale in the active rTMS group.

Our PANSS factor-based approach to investigate the impact of prefrontal rTMS on different negative symptom domains confirmed no overall beneficial effect of the active compared to sham rTMS.

Discussion: This secondary analysis of the RESIS trials has several limitations. First of all, the analysis of the primary endpoint was negative [24] and all subsequent secondary analyses showing a positive effect of the intervention (here: change in PANSS excitement factor) are of limited statistical power and therefore subject to uncertainty. On the other hand, our analyses confirm the negative finding of the original publication extends this finding to a broader negative symptom definition. Moreover, the new analysis provides a possible, but hypothetical explanation for the previously described effect of active rTMS on PANSS positive subscale. Of course, many other PANSS factor models are available and in pharmacological research the Marder factors [23, 35] have particular significance. However, the here used five-factor consensus model [21] includes the Marder factor results and our negative symptom factors overlaps with those factors. Another limitation is that it may be possible that our sham stimulation (coil tilted over one wing at an angle of 45°[24]) may still have been slightly biologically active as discussed elsewhere [24].

S50. EMPLOYING TEXT-MESSAGES TO IMPROVE MOTIVATION: MOBILE ENHANCEMENT OF MOTIVATION IN SCHIZOPHRENIA

Lauren Luther*[,1], Melanie Watkins[1], Annalee Johnson-Kwochka[1], Michelle Salyers[1]

[1]Indiana University-Purdue University

Background: Motivation deficits are among the strongest determinants of reduced functioning and quality of life in people with schizophrenia. Mobile interventions are a promising approach to improving these deficits because they can provide frequent cues and reinforcements to support goal-directed behavior in daily life. The objective of this study is to assess the initial feasibility/acceptability and effectiveness of Mobile Enhancement of Motivation in Schizophrenia (MEMS), a personalized mobile text message intervention, compared to a goal-setting alone intervention.

Methods: Fifty-six participants with a schizophrenia-spectrum disorder have been enrolled in this ongoing controlled pilot study. Twenty-seven participants have been randomized to MEMS, while 29 participants have been randomized to the goal-setting alone condition. Participants in both groups set individualized recovery goals to complete over an 8-week period. Those in the MEMS group also receive three sets of personalized, interactive text messages each weekday to reinforce and cue goal completion. Blinded assessments are conducted before and after the 8-week period and include validated measures of motivation, quality of life, and functioning. Goal attainment and self-reported satisfaction with MEMS are also assessed.

Results: To date, 36 participants (n = 18 in each group) have completed both baseline and follow-up assessments. Initial results suggest that relative to the goal-setting alone group, the MEMS group demonstrated significantly greater improvements in clinician-rated motivation ($F(1, 33) = 7.14$, $p = .01$; between-group $d = .89$). Specifically, the MEMS group demonstrated significantly higher clinician-rated motivation after 8 weeks (within-group $d = .62$), while clinician-rated motivation remained the same in the goal-setting alone group (within-group $d = -.02$). Across both groups, participants also significantly improved on clinician-rated functioning over time ($t(35) = -2.56$, $p = .02$, $d = .43$), but there was no difference between the two groups ($F(1, 33) = .01$, $p = .94$; between-group $d = .03$). No improvement on self-reported quality of life was observed in either group or across

the full sample. The MEMS group reported strong satisfaction with the text-messages. Recruitment has been completed, and analyses from the full sample will be ready to present at the meeting.
Discussion: Initial results indicate that MEMS is acceptable and may successfully improve motivation in people with schizophrenia-spectrum disorders. However, additional analyses with the full sample are needed to more rigorously test the feasibility and effectiveness of MEMS.

S51. MOTIVATIONAL ENHANCEMENT IMPROVES TREATMENT OUTCOMES OF MOBILE-BASED COGNITIVE REMEDIATION IN INDIVIDUALS WITH SCHIZOPHRENIA

Eun Jin Kim*[,1], YongChun Bahk[1], Kee-Hong Choi[1]
[1]*Korea University*

Background: Cognitive impairment is a core feature of schizophrenia, which limits functions of individuals with schizophrenia and negatively influences their quality of life (Green, 1993; Green et al, 2000; Heaton et al., 2001; Heinrichs, 1998). While pharmacological treatment is known to have a limited effect on impaired cognition in schizophrenia (Marder, 2006; Rund and Borg, 1999; Elie et al., 2010), a majority of literature has concluded that cognitive remediation(CR) produces small to moderate improvements (McGurk et al., 2007; Wykes et al., 2011). As the smartphone user population continues to increase, the effectiveness of CR based on mobile devices have started to be studied. While CR is effective in improving cognitive deficit, treatment adherence and engagement of participants in the real world setting is known to be poor compared to laboratory setting. Thus, in the current randomized controlled study, we aimed to investigate whether motivational intervention would enhance motivation, treatment adherence and neurocognitive function of individuals with schizophrenia.
Methods: All subjects participated in a group-based CR using mobile application (mCR) twice a week for five weeks, and were given opportunity to practice voluntarily outside the treatment sessions. While CR only group participated in usual CR with Q&A sessions, experimental group participated CR sessions integrated with motivational intervention. For motivational enhancement (ME), we employed principles (e.g., goal setting, linking of CR with life goals, etc) of the bridging group (Medalia, Revheim, & Herlands, 2009) along with key aspects of motivational interviewing (e.g., open end questions, affirmation, reflect, and summary). We hypothesized that compared to CR only group, CR+ME group would show higher levels of intrinsic motivation, attendance rate and extra voluntary training hours, and greater improvement in cognitive functions.
Results: We are undergoing the current project, and a total of 14 participants were randomly assigned to either CR+ME (n=8) or CR only (n=5). Among 14 participants, two participants dropped out (n=1 experimental group and n=1 control group).
Independent sample t-test were used to compare scores of demographics and clinical characteristics between groups, and no differences were found except for the PANSS excitement subscale ($t = 2.91$, $P < .05$) at the time of pre-treatment. Due to a small sample, we conducted paired sample t-tests to examine whether there was a significant difference between the pre and post-test for two groups, respectively. The paired t-test revealed improvements in coding, TMT-B, logical memory I and K-AVLT immediate recall performances of CR+ME ($t=-2.92$, $p < .01$; $t=-3.65$, $p < .05$; $t=-3.20$, $p < .05$; $t=-2.89$, $p < .05$), but not CR only. In addition, there were pre and post-treatment differences in motivation variables (MSQ) for CR+ME. Comparing task related motivational level of first session to the final 10th session, CR+ME showed increased identified regulation(IR) score of MSQ and decreased external regulation(ER) score (IR=22.3(3.2), 23.5(3.7); ER= 10.67 (3.88), 6.67 (3.08)).
Discussion: We conclude that ME is promising to further enhance neurocognitive and motivational outcomes of mCR. The data collection process is expected to be completed in late January 2018, and the results will be accordingly updated by the time of presentation at SIRS 2018. Limitations and future directions will be discussed.

S52. WORKING MECHANISMS OF VIRTUAL REALITY BASED CBT FOR PARANOIA: A RANDOMIZED CONTROLLED TRIAL EXAMINING COGNITIVE BIASES, SCHEMATIC BELIEFS AND SAFETY BEHAVIOR

Chris Geraets*[,1], Marije Van Beilen[1], Roos Pot-Kolder[2], Mark Van der Gaag[2], Wim Veling[1]
[1]*University Medical Center Groningen;* [2]*VU Amsterdam*

Background: Recently, the efficacy of a novel virtual reality based cognitive behavior therapy (VR-CBT) for paranoia was demonstrated. Cognitive biases, cognitive limitations, negative schematic beliefs and safety behavior have been associated with paranoid ideations and delusions. It is unknown whether VR-CBT affects these associated factors, and how changes in these factors relate to changes in paranoid ideation.
Methods: In this multi-center randomized controlled trial patients with a psychotic disorder and paranoia were randomized to VR-CBT (n = 58) or treatment as usual (TAU; n = 58). VR-CBT consisted of maximally sixteen 60-minute individual therapy sessions. Paranoia, safety behavior, schematic beliefs, cognitive biases and limitations were assessed at baseline, post-treatment (at three months) and follow-up (at six months). Mixed model analyses were conducted to study treatment effects. Mediation analyses were performed to explore putative working mechanisms by which VR-CBT reduced paranoia.
Results: VR-CBT, but not TAU, led to reductions in jumping to conclusions, attention for threat bias and social cognition problems. Schematic beliefs remained unaffected. The effect of VR-CBT on paranoia was mediated by reductions in safety behavior and social cognition problems.
Discussion: VR-CBT affects multiple mechanisms that are associated with paranoid ideation. Although maintaining factors of paranoia are likely to influence each other, targeting safety behavior and social cognitive problems seems effective in breaking the vicious circle of paranoia.

S53. COMPARISON OF RALOXIFENE AND ISRADIPINE AS AN ADJUNCTIVE TREATMENT IN COGNITIVE DEFICITS OF PATIENTS WITH SCHIZOPHRENIA

Bita Vahdani*[,1], Alireza Armani kian[1], Abdolreza Esmaeilzadeh[1], Saeedeh Zenoozian[1], Vida Yousefi[1], Saeedeh Mazloomzadeh[1]
[1]*Zanjan University of Medical Sciences*

Background: Cognitive impairment is the most important feature of schizophrenia that leads to severe social and functional disability. Improving neurocognitive physiopathologic aspect of schizophrenia is a current challenge to identify the pathway to develop goal directed clinical interventions in practice. In the current study we investigated the effect of raloxifine as a selective estrogen modulator and isradipine as a voltage gated L type calcium channel blocker on the enhancement of schizophrenic patients' cognitive deficits.
Methods: We designed a double blind randomized, parallel, placebo controlled clinical trials. 60 patients with schizophrenia randomized in 3 specific groups. The first group received isradipine 5 mg, the second raloxifine 60 mg and the third placebo for 6 consequent weeks, in the same shape capsules, 2 times a day, alongside treatment with the conventional antipsychotics. The initial and final lab tests, ECG, as well as cognitive tests in specific domains such as attention, processing speed, executive function and verbal memory were carried out.
Results: Our findings, revealed a remarkable association between adjunctive treatment of raloxifine in verbal memory deficits. moreover, isradipine treatment indicated significant improvement relative to placebo in verbal memory as well as attention dysfunction in some variables of the Stroop test. However, no effect was observed in processing speed and executive function deficits.
Discussion: The study provides the first evidence to our knowledge, which isradipine as a novel therapy was associated with improvement in verbal